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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,062	12/27/2001	Josef Froehler	449122020000	1767
25227	7590	05/02/2006		
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			EXAMINER ELALLAM, AHMED	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,062

Applicant(s)

FROEHLER ET AL.

Examiner

AHMED ELALLAM

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/27/2001.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “recorder” and “transmitter” must be shown or the feature(s) canceled from claim 19, the “modification means” must be shown or the feature(s) canceled from claim 20 and the “recorder” must be shown or the feature(s) canceled from claim 21. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4, 6, 7, 12, 14, and 19-21 objected to because of the following informalities:

In claim 4, line 10, the claimed "the information" lacks antecedent basis.

In claim 4, line 16, the claimed "the respective ATM connections" lacks antecedent basis.

In claim 6, lines 4 and 5, the claimed "the queue filling levels of the queues" lacks antecedent basis.

In claim 7, line 3, the claimed "the recording results" lacks antecedent basis.

In claim 12, line 3, the claimed "the queues" lacks antecedent basis.

In claim 14, line 3, the claimed "the queues" lacks antecedent basis.

In claim 19, line 17 and 21, the claimed "the reduced transmission resource element" lacks antecedent basis.

In claim 20, line 3, the claimed "the modification means" lacks antecedent basis.

In claim 21, line 17, the claimed "the respective ATM connections" lacks antecedent basis.

In claim 21, line 18, the claimed "the transmission results" lacks antecedent basis.

Other lack of antecedent basis may remain unnoticed. Applicants are required to provide the appropriate correction.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1 and 19, the specification doesn't adequately describe the limitation "the transmission resource elements which are allocated to the decentralized communications devices are at least partially reduced". The specification doesn't describe what the "transmission resource elements" are, nor give an example of a "transmission resource element". The specification refers to a connection(s) routed via a transmission resource element(s), see page 6, lines 32-34, and page 7, lines 33-34. Thus the transmission resource elements are understood to be an "unspecified" structure, also indicated by the boxes of figure 2 (tpr1, tpr2, and tpr3). Therefore,

reference to a “reduction of the transmission resource element” is not clearly described given structural evidence that “ transmission resource element(s)” might have.

Regarding claim 4, the specification does not adequately describe the feature of “the allocated transmission element is modified”. In particular, the specification doesn’t describe the nature of the modification given the structural nature of a transmission element. (See claims 1 and 19 above).

Claims 2-18, and 20-21 depend from respective independent claims 1 and 19 thus they are subject to the same rejection.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what is meant by “the transmission resource elements which are allocated to the decentralized communication devices are at least partially reduced”. In particular, it is not clear what is meant by reduced, Moreover, the transmission resource elements are understood from the specification to mean structural elements (see rejections 112 1st above) and reducing in this context of “structural element” make no sense. Similar remarks apply to the claimed “ the extent of each reduced transmission resource element which is allocated to a decentralized communication device is modified or retained as a function of the quality”, because the

meaning of the extent in the phrase “the extent of each reduced transmission resource element which is allocated to a decentralized communication device is modified or retained as a function of the quality” is vague and indefinite.

Claims 2-21 suffer from similar deficiencies as indicated in claim 1, thus they are subject to the same rejections.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3,19 and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Ghaibeh et al, US 5,926,478. Hereinafter referred to as Ghaibeh.

Regarding claim 1, with reference to figures 1, 10, 10A and 11, Ghaibeh discloses a method for matching transmission resources between head-end 22 (figure 1) (claimed central communication device) and a number of network units (NUs) 26 (claimed decentralized communication devices), the headend allocates upstream time slots to each network unit as function of the state of the connection that is routed via the respective allocated time slots (permits), see column 6, lines 60-68, and column 7, lines 1-10. (Examiner interpreted the claimed transmission resource element(s) of being timeslots as described in the specification (spec, page18, and lines 34-35)). (Claimed method for matching transmission resources between a central and a number of decentralized communications devices in which the central communication device

allocates a transmission resource element to each decentralized communication device as a function of the quality and/or transmission characteristics of at least one connection which is routed via the respective transmission resource element).

Ghaibeh further discloses allocating the permits (time slots) to NUs comprises VBR, ABR and CBR permits, and wherein each NU having at least one ATM cell in a respective VBR, ABR and CBR is given an equal allocation of the available upstream bandwidth for a respective service priority, see column 10, lines 60-67 and column 11, lines 1-12. Ghaibeh further discloses taking account of CDV (cell delay variation) in the provisioning of permits, see column 11, lines 27-44. (Examiner interpreted the allocation of time slots (dynamic allocation) to each NUs by the Headend in accordance with the class of traffic (CBR VBR... etc) (claimed quality) , and the tolerance level (claimed characteristics) of the connection type of each NU as being the claimed transmission resource elements allocated to the decentralized communication devices are partially reduced, and the quality and/or the transmission characteristics of the at least one connection is determined, and the extent of each reduced transmission resource element which is allocated to a decentralized communication device is modified or retained as a function of the quality).

Regarding claims 2 and 3, Ghaibeh discloses the permits are determined based on the demand for bandwidth, wherein the bandwidth is dynamically and adaptively granted among NUs. See column 1, lines 61-67, column 10, lines 47-67, and column 11, lines 1-11.

Regarding claim 19 (as best understood), with reference to figures 1, 10, 10A and 11, Ghaibeh discloses a communication arrangement having a headend 22 (figure 1) (claimed central communication device) and a number of network units (NUs) 26 (claimed decentralized communication devices), the headend allocates upstream time slots to each network unit as function of the state of the connection that is routed via the respective allocated time slots (permits) using fiber network (24, 25, figure 1) (the fiber network is interpreted of being the claimed transmission medium arranged between the central and the decentralized communication devices and have a transmission resource) , see column 6, lines 60-68, and column 7, lines 1-10.. The headend comprises a HEMAC (Headend media access controller) (claimed control unit (MAC) arranged in the central communications device) for providing permit (time slot allocation) as a function of requested ATM service connections. (Examiner interpreted the claimed transmission resource element(s) of being timeslots as described in the specification (spec, page18, lines 34-35)).

Ghaibeh further discloses allocating the permits (time slots) to NUs comprises VBR, ABR and CBR permits, and wherein each NU having at least one ATM cell in a respective VBR, ABR and CBR is given an equal allocation of the available upstream bandwidth for a respective service priority, see column 10, lines 60-67 and column 11, lines 1-12. Ghaibeh further discloses taking account of CDV (cell delay variation) in the provisioning of permits, see column 11, lines 27-44, wherein NU transmits a request information which contains a status count of the number of ATM cells awaiting upstream transmission, and receiving by the headend updated ATM cell queue information from a

group of NUs, see column 2, lines 51-67 and column 3, lines 1-7. (Examiner interpreted the allocation of time slots (dynamic allocation) to each NUs by the HEMAC in accordance with the class of traffic (CBR VBR...etc) (claimed quality) , and the tolerance level (claimed characteristics) of the connection type of each NU as being the claimed transmission resource elements allocated to the decentralized communication devices are partially reduced, and the NU transmitting a request information which contains a status count of the number of ATM cells awaiting upstream transmission as being the claimed "recording means for recording the quality and or the transmission characteristics of the at least one connection means for transmitting the recording result to the central communication device) (Note: means for transmitting are inherent to Ghaibeh, because that is needed for the transmission of the request), (Examiner interpreted the allocation of time slots to the NUs (permits) by the HEMAC in accordance with the received ATM cell queue information received from the NUs group as being the claimed control unit has modification means using which the extent of the reduced transmission resource element which is allocated to each decentralized communications device is modified or retained as a function of the recording result).

Regarding claim 21, as indicated above with reference to base claim 20, Ghaibeh discloses the connection being ATM connection such as CBR , ABR, VBR,..., (claimed at least one connection which is routed via the allocated transmission resource element is implemented using Asynchronous Transfer Mode ATM, with the ATM connection being configured with an ATM service class defined by the ATM forum,

which in each case specifies the quality and the transmission characteristics of the ATM connection);

receiving by the headend updated ATM cell queue information from a group of NUs, using counters (means for recording) for monitoring the CBR, ABR and VBR service queues filling level, see column 2, lines 51-67, column 3, lines 1-7, column 9, lines 58-67 and column 10, lines 1-11. (Claimed at least one queue is provided in each decentralized communication device for temporary storage of the information to be transmitted in the at least one ATM connection, and each decentralized communications device has filling level recording means for recording the current queue filling level of the at least one queue and transmitting the recording result to the control unit which is arranged in the central communication device);

Ghaibeh further discloses taking account of CDV (cell delay variation) in granting the permit (TDM slot) on dynamic fashion for different class of traffic, and based on the received queue level in each NU request, see, column 2, lines 51-67, column 3, lines 1-7, column 11, lines 27-44, column 10, lines 47-67, and column 11, lines 1-11. (Examiner interpreted the dynamic slot allocation of Ghaibeh based on received queues level for each class of traffic information (CBR ...VBR) from each NU as being the claimed quality and the transmission characteristics of the respective ATM connections are determined by assessing the transmitted recording results, and the transmission results, and the transmission resource elements which are allocated to the decentralized communication devices are modified as a function of the quality and the transmission characteristics).

Response to Arguments

6. Applicant's arguments filed 2/01/2006 have been fully considered but they are not persuasive.

Claim Rejections under 35 USC § 112:

Applicants indicated that "the reduction of the transmission resource elements are explained in detail on page 14, lines 14-31 of the specification". In response the passage Applicant relied upon doesn't describe the claimed feature of the reduction of the transmission resource element(s). As indicated above the specification refers to a transmission resource element of assumingly being a structural element (connection(s) routed via a transmission resource element(s), see page 6, lines 32-34, and page 7, lines 33-34), in other instances the same resource element is reduced as in pending claims 1, 13 and 19, increased as in claim 11, or modified as in claim 4, 8. The specification doesn't describe or give an example of what is being reduced, modified or increased other than the "transmission resource element". In the prior art system, usually it is the bandwidth that is allocated and the increase decrease or modification takes effect on the number of time slots allocated to a connection or group of connections based on the bandwidth demand and the nature of the connection(s) requested, it is within this context that the Examiner found a lack of description in the specification as originally filed. Moreover, claim 17 recites that "the transmission resource elements which are allocated to the decentralized communication device are **time-division-multiplex-oriented**", however, the specification fails short of relating between this time-division-multiplex-orientation and the reduction modification and

increase of the transmission resource element. Given the above, Examiner maintains the rejections under 112 1st paragraph as being proper.

Art rejections:

Applicants argue that “Ghaibeh is directed to setting up connections and that there is no reduction of transmission resource elements which are allocated to the decentralized communications devices”. Examiner, respectfully disagrees, if the transmission resource elements are to be interpreted as time slots allocation mechanism, then Ghaibeh does provide a dynamic allocation of bandwidth that reads on the claimed reduction of “transmission resource element”, as indicated in the rejections above.

Examiner notes that Applicants argument is not related to the claimed subject matter since at least no specific claim was mentioned in the argument. In addition, the ambiguity and the lack of description with regard to the “transmission resource element(s)” don’t provide a valid background for comparison with the teaching of Ghaibeh.

Examiner concludes that Applicant has to put the claims in condition to be searched, since the claims are indefinite and confusing, Examiner couldn’t perform a proper search against the pending claims (4-18, and 20). Once the claims are put in the proper form the Examiner will do an updated prior art search.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

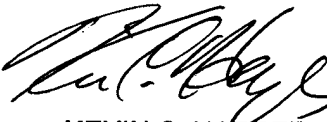
Any inquiry concerning this communication or earlier communications from the examiner should be directed to AHMED ELALLAM whose telephone number is (571) 272-3097. The examiner can normally be reached on 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, To Doris can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AE
Examiner
Art Unit 2616
April 30, 2006



KEVIN C. HARPER
PATENT EXAMINER